

ARGUMENTS/REMARKS

Applicants would like to thank the examiner for the careful consideration given the present application, and for the personal interview conducted on December 22, 2003. The application has been carefully reviewed in light of the Office action, and amended as necessary to more clearly and particularly describe and claim the subject matter which applicants regard as the invention.

Claims 1-8 and 19-31 remain in this application. Claims 9-18 have been canceled.

Claims 1-31 were rejected under 35 U.S.C. §103(b) as being unpatentable over Rahim (EP 0 881 625 A2) in view of Nagata (6,009,396). For the following reasons, the rejection is respectfully traversed.

Claim 1, amended as suggested by the Examiner, recites an "identification, during an identification phase, of the momentary acoustic scene on the basis of the extracted characteristics by *mapping* the extracted characteristics to *specific individual sound sources* of a *plurality of different* sound sources". The cited references do not teach this limitation of the claim.

The Examiner cited Nagata as teaching the mapping limitation discussed above. However, as discussed at the personal interview, Nagata does not require any mapping to specific individual sound sources of a *plurality of different* sound sources. Instead, Nagata assumes that an individual who is speaking is captured by an array of microphones for input into a device for performing speech recognition. Accordingly, Nagata has only a "speech input unit" (see Fig 3) and a "speech detection unit" (see Fig. 7, 8). Nagata is not concerned with mapping to more than one sound source, but just assumes that the sound source is an individual who is speaking. At the personal interview, the Examiner suggested clarifying the mapping language with respect to multiple sound sources. Applicant complies in the current amendments. Thus, because the reference does not suggest more than one sound source, claim 1 is therefore patentable over the references, even if combined.

Claims 2-8, which depend on claim 1, directly or indirectly, are thus patentable over the reference for the same reasons as claim 1, as well as for the limitations contained therein.

Claims 19-25 are patentable over the reference for the same reasons discussed above

(i.e., for mapping to a plurality of sound sources). In addition, claim 19 recites the step of “executing said selected process to generate a processed *acoustic* signal”, which is not taught by either reference. As was discussed at the personal interview, both Rahim and Nagata are *speech recognition* systems, and thus they generate *text*, not an acoustic signal. This is supported by the fact that Nagata uses a “speck recognition unit” and a “dictionary” and “word recognition” and “word spotting” (See Figs 3, 7, 8; col. 5 lines 18-42; col. 4 lines 33-35; and col. 10, lines 40-57). There is no suggestion in either reference of outputting an *acoustic* signal. Thus, claim 19 is patentable over the references for at least this additional reason.

Furthermore, claim 23 recites the step of “processing said acoustic signal to generate a hearing signal for improving the hearing ability of a user” and claim 25 recites that said suitable process is “chosen from a plurality of available processes, said process for improving the hearing ability of a user”, neither of which are suggested by either reference. Similarly, claims 20 and 25 recite the step of “analyzing the acoustic structure of the acoustic signal for identifying tonal signals in acoustical signals generated by speech and tonal signals generated by music”. As discussed at the personal interview, neither reference suggests identifying tonal signals in acoustical signals generated by *music*. In addition, claims 24 and 25 recite the step of “generating an *audio signal* from said processed acoustic signal for transmission to” a user, which is not suggested by either reference.

Claim 26 recites a step of identifying “the momentary acoustic scene on the basis of the characteristics *not limited to speech characteristics*”. As discussed above, both Rahim and Nagata assume only speech characteristics. Neither suggest using any other type of characteristic. Accordingly, the claim element does not read on the references, and thus claim 26 is patentable over the references. Claims 27-28, which depend on claim 26, are patentable for at least the same reasons.

Finally, claim 29 recites a step of “selecting and executing an audio signal analyzing process from a plurality of available audio signal analyzing processes based on the identified momentary acoustic scene, said audio signal analyzing process for execution in a hearing device for improving the hearing of a user”. Neither Rahim nor Nagata teach the use of any hearing device, or improving the hearing of a user. Instead, the references are concerned only with speech recognition, and thus the generation of textual outputs. Hence, the combination

of references cannot teach this element of the claim, and thus claim 29 is patentable over the references. Claims 30-31, which depend on claim 29, are patentable for at least the same reasons.

Further, new claim 31 contains the same limitation as claim 25, and thus is patentable over the references for the same reason.

Finally, the Examiner has not provided the proper motivation for combining the references, and thus has not supported a prima facie case of obviousness.

In consideration of the foregoing analysis, it is respectfully submitted that the present application is in a condition for allowance and notice to that effect is hereby requested. If it is determined that the application is not in a condition for allowance, the examiner is invited to initiate a telephone interview with the undersigned attorney to expedite prosecution of the present application.

If there are any additional fees resulting from this communication, please charge same to our Deposit Account No. 16-0820, our Order No. 33234.

Respectfully submitted,

PEARNE & GORDON, LLP

By: 

Robert F. Bodi, Reg. No. 48,540

1801 East 9th Street
Suite 1200
Cleveland, Ohio 44114-3108
(216) 579-1700

July 20, 2004